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OSTRY, O.YA., SOBIYEVA, Z.I., SKVIRSKAYA, E.A., MAGAYEVA, S.V.,
BABAYAN, S.A., STRUKOVA, L.O., VAKAR, M.D., AZHIPA, YA.I.

"The trophic function of the nervous system and the nervous
dystrophic process."

Report submitted, but not presented at the 22nd International
Congress of Physiological Sciences.
Leiden, the Netherlands 10-17 Sep 1962

AGADZHANYAN, N.A., mayor med.sluzhby, kand.med.nauk; YAKAR, M.I., podpolkovnik med.sluzhby, kand.med.nauk; MANSUROV, A.R., podpolkovnik med.sluzhby; TSIIVILASHVILI, A.S., mayor med.sluzhby

Decompression tissue emphysema and methods of its prevention. Voen.-
med.zhur. no.12:45-48 D '58. (MIRA 12:12)
(DECOMPRESSION SICKNESS, prev. & control,
decompression tissue emphysema in aviators (Rus))
(EMPHYSEMA, prev. & control,
same)

VAKAR, M.I., kand.med.nauk, podpolkovnik meditsinskoy sluzhby; AGADZHANYAN, N.A.,
kand.med.nauk, mayor meditsinskoy sluzhby; CHERNYAKOV, I.N., kand.med.
nauk, kapitan meditsinskoy sluzhby

Changes in blood oxygen at high altitudes and their relation to
the effectiveness of a space suit. Voen.med.zhur. no.5:29-32
My '59. (MIRA 12:8)

(OXYGEN, in blood,
at high altitudes, eff. of effectiveness of
space suit (Rus))

(ALTITUDE, eff.
on blood oxygen, eff. of effectiveness of
space suit (Rus))

AGADZHANYAN, N.A., mayor med.sluzhby; VAKAR, M.I., podpolkovnik med.sluzhby;
TSIVILASHVILI, A.S., mayor med.sluzhby; WALKIN, V.B.; CHERNYAKOV,
I.N., kapitan med.sluzhby

Reaction of the human cardiovascular system during hypoxia. Voen.-
med.zhur. no.2:65-69 F '60. (MIRA 13:5)
(ANOXEMIA physiology)
(CARDIOVASCULAR SYSTEM physiol.)

27.2100

17.2150

32557
S/177/61/000/006/002/003
D298/D305

AUTHORS:

Agadzhanyan, N.A., Major, Medical Corps, Candidate of Medical Sciences, Vakar, M.I., Colonel, Medical Corps, Candidate of Medical Sciences, Smirnov, V.A., Major, Medical Corps, and Chernyakov, I.N., Major, Medical Corps, Candidate of Medical Sciences

TITLE:

Change in pulmonary ventilation with excess pressure respiration at high altitudes

PERIODICAL: Voenno-meditsinskiy zhurnal, no. 6, 1961, 58-61

TEXT: The authors developed a special device and method for determining pulmonary ventilation in a pressure chamber. A.I. Shaposhnikov, a Lieutenant-Colonel in the Engineering Branch, assisted the authors in devising the method. The device (see figure) consists of a mask (1) giving an airtight seal with the face, a gas meter (6) fitted in an airtight case, tubes connecting the mask with the meter, and valves for controlling the direction of the oxygen flow in the system. During

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excess pressure respiration oxygen passes from the oxygen apparatus (12) along the tube (10) through the valve (8) and into the space within the helmet. When the subject inhales, it then passes through the valve (2) under the mask and into the lungs. From the lungs the air enters the gas meter through the tubes (3 and 4), and from the meter it passes through the tube (7) and valve (9) into the atmosphere. With this arrangement no exhaled air escapes from the system without passing through the meter and no oxygen passes inadvertently through the same meter. Oxygen which enters the space within the helmet during the exhalation phase is released into the atmosphere through valves (11) and (9), by-passing the meter. Valves (5) and (11) close during inhalation and prevent air from the tubes and gas meter from entering the space within the helmet. The positioning of the gas meter before the exhalation valve (9) ensures that the pressure in the lungs and the pressure in the gas meter are practically equal. This enables the absolute values of pulmonary ventilation to be determined immediately without prior calculations reducing the pressure of the air passing through the gas meter to the pressure in the lungs. Control experiments showed that under normal

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conditions the pulmonary ventilation readings recorded by this method coincided with the readings of commonly-accepted methods. Experiments with excess pressure respiration were conducted with 6 healthy men aged 20-23. Apart from pulmonary ventilation, the rate and amplitude of the respiratory movements, the chest circumference and the pressure exerted on the body by a high-altitude compensating suit were recorded. The tests were conducted at normal pressure ("on the ground") and at an increased pressure of 105 mm Hg ("at high altitude"). The results of the tests are given in tabular form and show that in persons who took well to excess pressure respiration pulmonary ventilation "on the ground" and "at high altitude" was maintained at close to the original level. In almost all cases, however, the volume of respiration under excess pressure was reduced by 50-60% of the original level. With such a reduction, adequate pulmonary ventilation could only be obtained by an increase in the rate of respiration, a phenomenon which was observed in the tests (an increase of 3-13 respirations a minute). These findings disagree with those of A.G. Kuznetsov (1960), who noted a considerable increase in pulmonary ventilation under excess pressure respiration,

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Change in pulmonary ...

mainly by an increase in the depth of the respiratory movements and, consequently, an increase in the volume of respiration. These results, however, were obtained in respiration at an excess pressure of 15-25 mm Hg and without the use of compensating clothing. With increased pressure, the material of the compensating suit became harder. This led to an increased pressure on the body, especially in the thoracic and abdominal regions, during the inhalation phase, and a reduction of suit pressure during exhalation, whereas for free respiration the opposite should be the case. The pressure difference between the respiration phases sometimes reached 40-60 mm Hg or more. Under normal conditions chest expansion during respiration was 0.6-1.2 cm, whereas under excess pressure respiration it comprised a mere 0.2-0.4 cm. This reduction in the amplitude of the respiratory movements naturally led to a reduction in the volume of respiration. The authors conclude that, in addition to their basic function of compensating for increased pressure in the lungs, high altitude suits also give rise to factors that complicate respiration and blood circulation. The authors' observations took no account of the

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AGADZHANYAN, N.A. (Moskva); VAKAR, M.I. (Moskva); SMIRNOV, V.A. (Moskva);
CHERNYAKOV, I.N. (Moskva); SHAPOSHNIKOV, A.I. (Moskva)

Method of measuring pulmonary ventilation in respiration under
increased pressure at high altitudes. Fiziol. zhur. 47 no.6:
778-780 Je '61. (MIRA 15:1)
(RESPIRATION) (ALTITUDE, INFLUENCE OF)

S/865/62/002/000/029/042
D405/D301

AUTHORS: Alifanov, V.N., Vakar, M.I., Yeremin, A.V. and Ivanov, A.Ye.

TITLE: Effect of resistance breathing on respiration under excess pressure

SOURCE: Problemy kosmicheskoy biologii. v. 2. Ed. by N. Sisa-
kyan and V. Yazdovskiy. Moscow, Izd-vo AN SSSR, 1962,
287-289

TEXT: This article was presented at the 10th European Con-
gress on Aviation and Space Medicine, Paris, 26-30 September, 1961.
The effect of changes in intrapulmonary pressure, due to pressure
breathing, on the respiratory mechanism is investigated. 50 experi-
ments were conducted on seven subjects (young healthy males aged
23-33), under normal atmospheric pressure and also in a pressure
chamber with a rarefied atmosphere corresponding to an altitude of
20 km. The oxygen apparatus used in the experiments had a special
device which permitted reduction of the excess pressure in the in-

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Effect of resistance ...

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halation phase as compared to that in the exhalation phase. Conclusions: If the variations in intrapulmonary pressure exceeded 100 mm water column, then the physiological functions of the organism underwent a general disturbance. The effect of intrapulmonary pressure fluctuations on the organism is the stronger the larger these fluctuations and the more rarefied the ambient atmosphere; the respiratory function is the one to be mostly affected. The replacement of the oxygen mask by a hermetic helmet (i.e. an increase in dead space) caused more serious disturbances in the respiratory mechanism if the pressure-drop in the inhaling phase exceeded 50-100 mm water column. Intrapulmonary pressure fluctuations of 200-300 mm water column were sometimes accompanied by a total disturbance of the respiratory mechanism. The oxygen concentration of the blood decreases. The bioelectric activity of the respiratory muscles is a reliable indicator of respiration distress due to the use of breathing apparatus.

Card 2/2

L 11307-07 ENT(1) SCTB DD/GD

ACC NR: AT6036511

SOURCE CODE: UR/0000/66/000/000/0085/0086

AUTHOR: Vakar, M. I.; Chernyakov, N. I.; Maksimov, I. V.; Glazkova, V. A.;
Azhevskiy, P. Ia. 20

ORG: none

TITLE: Moisture loss in the human organism at high altitudes [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 85-86

TOPIC TAGS: high altitude physiology, alpine acclimatization, hypoxia, human physiology, perspiration

ABSTRACT: Moisture loss in man during exposures of several hours to high altitudes (30,000 m and above) during pressure oxygen breathing was studied.

The subjects wore altitude compensating suits which did not prevent contact between the skin and the high vacuum and did not impede evaporation of moisture from the surface of the body and from underclothing. Water loss was calculated by weighing the subjects before and after the experiment. Decrease in temperature of the skin and underclothing was recorded with a thermocouple and served as an indirect index of evaporation intensity.

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L 11387-67

ACC NR: AT6036511

The subjects were at rest in some experiments and performed physical work of medium difficulty in others.

It was found that during prolonged resting exposure to high altitudes moisture loss increases by 1.5 to 2 times (from 40-50g/hr to 70-120g/hr). This increase is due to increased evaporation from the skin in a rarefied atmosphere. Increased perspiration due to emotional tension was also sometimes seen.

Step test exercises caused still greater water loss (120 to 225 g/hr). Increased moisture loss at high altitudes was primarily due to the wearing of altitude equipment which hindered movement, as well as to rarefied atmosphere and emotional tension.

Skin temperature dynamics confirmed the intensification of evaporation from the body and underclothing at high altitudes. [W.A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 2/2 egk

VAKAR, T.B.

Structure and development of embryonal and adventitious roots
in certain monocotyledons. Biul.Galv.bot.sada no.25:86-93 '56.
(MLRA 10:1)

1. Uman'skiy sel'skokhozyaystvennyy institut.
(Roots (Botany)--Anatomy) (Grasses)

VOLKOV, V.A.; VAKAR, T.K.

Conference on the mechanization of welding operations in
agricultural machinery construction. Svar. proizv. no.4:46
Ap '65. (MIRA 18:6)

1. Zamestitel' predsedatelya oblastnogo pravleniya Nauchno-
tekhnicheskogo obshchestva mashinostroitel'noy promyshlennosti
(for Volkov). 2. Glavnyy svarshchik Chernomorskogo soveta
narodnogo khozyaystva (for Vakar).

1ST AND 2ND CATEGORIES										PROCESSES AND PROPERTIES INDEX									
<p><i>Ca</i></p> <p>Ludwigite from polar Yakutia. V. A. Yakar, E. V. Knipovich and I. I. Shafranovskii. <i>Mém. soc. russ. minéral.</i> 63, 381-8 (in English 385) (1934).—In the upper part of the valley of the Douda River in the Tas Khayak-takh Mountains, ludwigite occurs in limestones contact-metamorphosed by granites, the second reported occurrence in the U. S. S. R. The mineral is so nearly opaque that its optical properties cannot be accurately detd., except that it is pleochroic and anisotropic. It contains magnetite inclusions. The hardness = 5; sp. gr. 4.20. It is slowly sol. in acids. The analysis shows that the formula is $R_1R_2Fe_2O_6$, in which R_1 closely approaches $2Mg + 2Fe$, while in previously reported ludwigites $R_1 = 3Mg + Fe$.</p> <p>R. H. Beckwith</p>										<p>COMMON VARIANTS</p>									
<p>ASB-11A METALLURGICAL LITERATURE CLASSIFICATION</p>										<p>EXTRA INFORMATION</p>									
<p>EXTRA INFORMATION</p>										<p>EXTRA INFORMATION</p>									

VAKAR, V. A.

Perspektivy razvitiia bezdorozhnogo transporta v Arktike. [Prospects of development of transport over impassible roads]. (Problemy Arktiki, 1937, no. 2, p. 152-59).
DLC: G600.P7

SO: Soviet Transportation and Communications, A Bibliography, Library of Congress, Reference Department, Washington, 1952, Unclassified.

Petrographic and petrochemical characteristics of rocks
in the northeastern part of the Kolyma region. V.
Vikar and M. Moldavsky. *Trav. inst. pétrol. Acad.*
Sov. P. R. S. S. 13, 21-68(1934); Rev. géol. 19, 255.

J. F. Schärer

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ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

CA

Nepheline syenite in the gabbro-syenite intrusive of Tagil-Kushvina. V. Vakar. *Doklady Akad. Nauk S.S.S.R.* 90, 415 (1953). Although nepheline is observed in rocks of the maskite type in the southern Ural, in the northern part of the Tagil-Kushvina massive and, again, formations were not yet known. V. describes a nepheline-bearing syenite vein in garnet epidote skarns in the Fe ore deposits of Gora Blagodat. Fresh nepheline is scarce since the intrusives are highly metamorphic, but pseudomorphs of cancrinite, zeolites, heulandite, and spursenite (natrolite) after nepheline are frequent. Characteristic parageneses are those with argillite, argillite, hastingsite, lepidomelan, and SO_2 -cancrinite, wolomite, heulandite, and natrolite. Microscopic examination of the nepheline rocks shows K-feldspar (microperthite), albite, oligoclase (10-15% An), argillite, diopside, heulandite, hastingsite, lepidomelan, sphene, apatite, magnetite, and the decomposed products mentioned above, including calcite and chalcidone. The amphibole forms characteristic reaction rims around the pyroxene grains, with a strong pleochroism. Another interesting rock is a nepheline-monzonite, which occurs in deeper horizons of the Kushvina massive, with andesine (35-40% An), and coarse-grained K-feldspar (microperthite). The chemical composition of the nepheline syenites of the Kushvina region ("kushvinites") is very similar to that of nepheline rocks from the Longfellow Mine, Colorado. W. Ficht.

CA

The nepheline syenites of the middle Urals. V. V. Vakhutskiy and N. N. Rumin. *Izvest. Akad. Nauk S.S.S.R., Ser. Tsvet.* 1966, 145-62 (English summary); cf. *C.A.B.* 44, 6201c. Nepheline syenites are associated with the Gornobagovat Fe ore. Chem. analyses and petrographic data are given for 11 rocks. Spectrographic analyses showed the ores to contain V, Co, Ni, and Mg. Michael Fleischer

1. SUNIN, N. G., VAKAR, V. A.
2. USSR (600)
4. Ore Deposits - Goroblagodatskaya Deposits
7. Geological report with a calculation of the ore reserves of the southern bed of the Goroblagodatskaya iron ore deposits. (Abstract.) Izv.Glav.upr.geol.fon. no. 2, 1947

9: Monthly List of Russian Accessions. Library of Congress. March 1953. Unclassified.

1. VAKAR, V.
2. USSR (600)
4. Ural Mountains - Iron Ores
7. Materials on iron and manganese mineralization in the circumpolar Urals.
(Abstract.) Izv, Glav. upr. geol. fon. no. 2, 1947

9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

VAKAR, V. A.

VAKAR, V.A.

Brief history of the development of tectonic movements in the
northern part of Central Siberia. Trudy Nauch.-issl. inst. geol.
Arkt. 89:274-293 '56. (MIRA 11:1)
(Siberia--Geology, Structural)

TKACHENKO, B.V.; RABKIN, M.I.; DEMOKIDOV, K.K.; VAKAR, V.A.; GROZDILOV, A.L.;
BUTAKOVA, Ye.L.; STREIKOV, S.A.

Geology of the northern part of the Central Siberian Plateau.
Trudy Nauch.-issl. inst. geol. Arkt. 81:133-242 '57. (MIRA 11:5)

1. Sotrudniki instituta geologii Arktiki.
(Central Siberian Plateau--Geology)

MARKOV, F.G.; RAVICH, M.G.; VAKAR, V.A.

Geology of the Taymyr Peninsula. Trudy Nauch.-issl. inst. geol.
Arkt. 81:313-387 '57. (MIRA 11:5)

1. Ekspeditsii Nauchno-issledovatel'skogo instituta geologii Arktiki
i tresta "Arktikrazvedka" Gorno-geologicheskogo upravleniya Glav-
sevmorputi.

(Taymyr Peninsula--Geology)

RAVICH, M.G.; VAKAR, V.A.; GRAMBERG, I.S.

Concerning A.M. Daminova's article "More on the age of the
crystalline schist complex in the Taymir Peninsula" (Sovetskaia
geologiya, no.6, 1958). Inform.biul.NIIGA no.11:77-80
'58. (MIRA 12:6)

(Taymir Peninsula--Schists)

VAKAR, V.A.; VORONOV, P.S.; DEMENITSKAYA, R.M.

~~Regional faults in the northern part of central Siberia. Trudy~~
NIIGA 67:87-93 '58. (MIRA 12:10)

(Russia, Northern--Faults (Geology))

RAVICH, M.G.; VAKAR, V.A.; GRAMBERG, I.S.

Concerning A.M. Daminova's article "Age of the crystalline schist complex in the Taymyr Peninsula" ("Sovetskaya Geologiya," no.58, 1957). Sov. geol. 1 no.3:130-132 Mr '58. (MIRA 11:5)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Taymyr Peninsula--Schists)

VAKAR, V.A.

First All-Union Conference on Volcanology. Inform.biul.NIIGA
no.16:8-11 '59. (MIRA 15:3)
(Volcanoes—Congresses)

VAKAR, V.A.; LEBEDEV, A.F.

Tectonics and volcanism of Siberian trap formations. Trudy NIIGA
114:119-125 '60. (MiRA 13:11)
(Siberia--Geology, Structural)

VAKAR, V.A.

Evolution of the Taymyr geosyncline. Sov.geol. 4 no.11:109-120
N '61. (MIRA 14:11)

1. Nauchno-issledovatel'skiy institut geologii Arktiki.
(Taymyr Peninsula--Folds (Geology))

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gone through the postgerminative development stage, but have been transformed into
embryonic-like cells.

VAKARCHUK, A.; KONSTANTINOV, I.; TROFIMOVA, L., red.

[Rural builders of the Altai contemplate new frontiers; work practices of the "Altai Territory Construction Administration"] Sel'skie stroiteli Altaia namechaliut novye rubezhi; opyt upravleniia "Altayskii stroi." Moskva, Trest "Orgsovkhozstroi," 1963. 13 p.

(MIRA 17:8)

1. Russia (1917- R.S.F.S.R.) Ministerstvo stroitel'stva. Glavnoye upravleniye po delam sel'skogo i kol'khoznoho stroitel'stva. 2. Glavnyy inzhener upravleniya "Altayskii stroi" (for Vakarchuk). 3. Nachal'nik otdela tresta "Orgsovkhozstroi" (for Konstantinov).

YAKARCHUK, B. ^{dis}~~S.~~, Cand Phys-Math Sci -- "Differential geometric properties of certain curves and surfaces in ~~the~~ Lobachevskiy space." [Kiev, 1959]. 9 pp (Min of Higher Education UkrSSR. Kiev Order of Lenin Polytech Inst), 150 copies (KL, 27-59, 118)

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YASTREBOV, Yu.N., kand.fiziko-matematicheskikh nauk, dotsent; VAKARCHUK, B.
S., inzh.

Some analytic indications of the distribution of straight lines in
a Lobachevskii space. Trudy LIIVT no.26:274-280 '59. (MIRA 14:9)
(Spaces, Generalized)

88296

S/041/60/012/001/003/007
C111/C222

16.5600

AUTHOR: Vakarchuk, B.S.

TITLE: On the Spherical Mapping of Curves and Surfaces in the Lobachevskiy Space

PERIODICAL: Ukrainskiy matematicheskiy zhurnal, 1960, Vol. 12,
No. 1, pp 87 - 92

TEXT: Let a surface in the Lobachevskiy space be given by

$$(1) \quad x^k = x^k(u^1, u^2) \quad (k = 0, 1, 2, 3); \quad \sum_{k=1}^3 x^{k^2} - x^{0^2} = -1$$

Let ξ^i ($i = 0, 1, 2, 3$) be the direction cosines of the normal of (1). The parameter equations of the normal in (u^1, u^2) read

$$(2) \quad X^i = x^i(u^1, u^2) \operatorname{ch} \frac{v}{r} + \xi^i(u^1, u^2) \operatorname{sh} \frac{v}{r} \quad (i = 0, 1, 2, 3).$$

Then the spherical image of (1) on a sphere with the radius t_0 and the center in 0 is given by
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On the Spherical Mapping of Curves and Surfaces in the Lobachevskiy Space

$$(10) \quad \begin{cases} x^k = \frac{x^k \pm \xi^k}{x^0 \pm \xi^0} \operatorname{sh} \frac{t_0}{r} & (k = 1, 2, 3) \\ x^0 = \operatorname{ch} \frac{t_0}{r} \end{cases}$$

If $d\sigma$ is the line element of (10), $d\sigma^2 = \alpha_{ij} du^i du^j$; g_{ij} , b_{ij} , r_{ij} are the coefficients of the first, second and third fundamental forms of (1), K_0 is the relative complete curvature of (1), H is the mean curvature of (1) then

$$(14) \quad \alpha_{ij} = \frac{\left(\frac{1}{r^2} - K_0\right) g_{ij} - \left(H \pm \frac{2}{r}\right) b_{ij}}{(x^0 \pm \xi^0)^2} \operatorname{sh}^2 \frac{t_0}{r}$$

From (14) it follows 1) for a spherical mapping the curvature lines of the surface go over into an orthogonal net of the sphere ; 2) on every surface the umbilical points are conformity points of the spherical image ;
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S/041/60/012/001/003/007
C111/C222

On the Spherical Mapping of Curves and Surfaces in the Lobachevskiy Space

3) the net of the asymptotic lines of a minimal surface goes over into a rhombic net on the sphere etc.
Then the author gives the equations of the tangent and binormal indicatrices of a curve of the Lobachevskiy space for a spherical mapping (with the aid of the formulas of Bianchi being analogous to the formulas of Frenet).

There are 2 references : 1 Soviet and 1 Italian.

SUBMITTED: March 13, 1959

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VAKARCHUK, B.S. (Chernovtsy)

Spherical indicatrices of curves in Lobachevskii space and some of their properties. Izv. vys. ucheb. zav.; mat. no. 2:12-19 '63. (MIRA 16:3)

(Curves)

(Geometry, Non-euclidean)

VAKARCHUK, B.S. (Dnepropetrovsk)

The Darboux tensor and second-order surfaces in Lobachavskii space.
Ukr. mat. zhur. 16 no.5:671-675 '64. (MIRA 17:10)

26295

S/190/61/003/008/008/019

B110/B218

15-8050

AUTHORS: Ostroverkhov, V. G., Vakarchuk, I. S., Sinyavskiy, V. G.

TITLE: Kinetics of polymerization of 2-methyl-5-vinyl pyridine and its copolymerization with styrene

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 8, 1961, 1197-1202

TEXT: It was the aim of the present work to determine the constants of polymerization rates of 2-methyl-5-vinyl pyridine (MVP) in benzene, in the presence of benzoyl peroxide (BP) or azoisobutyric acid dinitrile (ABN) as an initiator. To determine the relative activity constants r_1 and r_2 of the monomers, the authors also studied thermal block polymerization of MVP without initiator, and copolymerization of MVP and styrene in the presence of ABN. The reagents MVP and styrene were purified by double distillation and, after that, either used immediately or stored in a Dewar vessel containing dry ice (maximum storage time 24 hr). Benzene was purified by H_2SO_4 and then distilled by Na; BP and ABN were

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Kinetics of polymerization of ...

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twice recrystallized from absolute methanol while petroleum ether was purified by boiling with Na and subsequent distillation (boiling point 50 - 70°C). Polymerization of MVP in solution: The benzene solution of MVP and the initiator were filled into ice-cooled ampoules which were fused in N₂ atmosphere, heated in a thermostat, and then cooled in ice.

The content of ampoules was introduced into a flask by means of acetone, and the polymers were precipitated by adding the 2.5-3-fold volume of petroleum ether. When using ABN as initiator, polymerization occurred at 60, 70, and 80°C. The concentration of MVP was 1.7 - 1.9 mole/l, that of

the initiator $\sim 7 \cdot 10^{-3}$ mole/l. For 70°C, the authors graphically found the equation $dx/dt = k(a - x)^{n_c m}$, where a = initial concentration of monomer, c = concentration of initiator, m = 0.5, n = 1.5. Solution of the equation yielded: $k = \langle [a^{1-n} - (a-x)^{1-n}] \cdot m k_B \rangle / \langle (1-n) c_0 [1 - \exp(-k_B m t)] \rangle$.

Here, k_B denotes the decomposition constant of the initiator at a given temperature T°. Calculation of k_B according to V. van Hook, A. Tobolsky
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Kinetics of polymerization of ...

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(Ref. 4: J. Amer. Chem. Soc., 80, 779, 1958) led to the following results:
for 60°C: $3.2 \cdot 10^{-2}$, for 70°C: 0.125, and for 80°C: 0.446. For k
($l \cdot mole^{-1} \cdot min^{-1}$), the authors found: $k_{60} = 3.93 \cdot 10^{-3} \pm 8 \cdot 10^{-5}$; k_{70}
 $= 1.15 \cdot 10^{-2} + 8 \cdot 10^{-5}$; $k_{80} = 2.58 \cdot 10^{-2} \pm 1.1 \cdot 10^{-3}$, $E_{act} = 22$ kcal/mole.

In the presence of BP: $m = 0.5$; $n = 1.3$, k_B for 60°C = $9.94 \cdot 10^{-3}$, for
80°C = 0.13, $k_{60°C}$ (in $l^{0.8} \cdot mole^{-0.8} \cdot min^{-1}$) = $3.28 \cdot 10^{-3} \pm 1.7 \cdot 10^{-4}$; $k_{80°C}$
 $= 1.66 \cdot 10^{-2} \pm 2.7 \cdot 10^{-4}$, $E_{act} = 18.9$ kcal/mole. Thermal polymerization of
MVP without initiator was carried out at 80, 100, and 120°C. For 120°C,
the authors found: $dx/dt = k_1[M]$, where $[M]$ denotes the monomer
concentration in parts of the initial concentration. k_1 (determined

graphically) amounted to $6.5 \cdot 10^{-4} min^{-1}$. Results obtained at 80 and 100°C are
very inaccurate due to the low yield in polymers. The polymers of MVP

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S/190/61/003/008/008/019

B110/B218

Kinetics of polymerization of ...

are insoluble and not capable of swelling in H_2O , ether, and petroleum ether, soluble in alcohols, dioxane, acetic acid, mineral acids, in the initial monomer, and in chloroform, poorly soluble in aromatic hydrocarbons, acetone, and CCl_4 . Boiling point was between 200 and 235°C; softening occurred at about 165-170°C. The viscosity in propanol at 25°C showed a minimum in the concentration range of 0.1 - 0.2 g/100 ml. 0.4% solutions exhibited the well-known dependence of viscosity on polymerization temperature and concentration. Copolymerization of MVP and styrene was carried out at 60°C, in the presence of 0.16 - 0.2% by weight of ABN. The N content of copolymers was determined according to Dumas. Table 2 shows the results. The copolymerization constants were graphically determined from the equation: $F(f-1)/f = r_1 F^2/f - r_2$ (f, F = molar ratios of monomers in the copolymer and in the initial mixture) according to R. Fineman and S. Ross (Ref. 8; J. Polymer Sci., 5, 259, 1950); r_1 (MVP) = 0.88 ± 0.2; r_2 (styrene) = 1.19 ± 0.12. The copolymers

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Kinetics of polymerization of ...

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melt at 210 - 240°C. At 160 - 170°C, they shrink. They are readily soluble in acetone, dioxane, chloroform, and acetic acid. In methanol, only copolymers with a higher mol. content of MVP than 0.2 - 0.3 are readily soluble. There are 4 figures, 2 tables, and 8 references: 3 Soviet and 5 non-Soviet.

ASSOCIATION: Institut khimii polimerov i monomero AN USSR
(Institute of Polymer and Monomer Chemistry AS UkrSSR)

SUBMITTED: October 14, 1960

Table 2. Block polymerization of MVP with styrene in the presence of ABN.
Legend: (1) Composition of initial mixture, molar fractions; (2) content of nitrogen in the copolymer, %; (3) composition of the copolymer, molar fractions; (4) yield of copolymer, %; (5) viscosity of a 0.4% solution in toluene; (6) MVP; (7) styrene.

Card 5/6

OSTROVERKHOV, V.G.; VAKARCHUK, I.S.

Reactions of derivatives of symmetrical triazine. Part 1.
Reactions of cyanuric acid with α -oxides. Ukr. khim. zhur.
28 no.1:94-101 '62. (MIRA 16:8)

1. Institut khimii monomerov i polimerov AN UkrSSR.

VAKERELSKI, I.

New type of apparatus for manuring and its attachment to a horse-driven cultivator. p. 19. MASHINIZIRANO ZEMEDELIE. Vol. 7, no. 7, July 1957. Sofia, Bulgaria

SOURCE: East European Accessions List, (EEAL) Library of Congress, Vol. 6, No. 1, January 1957

VAKARELSKI, I.

Fitting, and working with, machines for fertilizing agricultural plants. p.15.
(MASHINIZIRANO ZEMEDELIE, Vol. 8, no. 5, May 1957, Sofia, Bulgaria.)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 12, December 1957 Uncl.

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Bibliography of Bulgarian ethnography for 1943 to 1952. p. 451 .
EZVESTIIA NA ETNOGRAFSKIIA INSTITUT S MUZEI. Vol. 2, 1955.
Sofia, Bulgaria. Ethnography of the Bulgarians; bibliography.
p. 458.

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Congress, Vol. 6, No. 1, January 1957

VAKARELSKY, G.

Changes in the life and culture of villages during the building of socialism.
In French. p.365.
(Acta Ethnographica, Vol. 5, no. 3/4 1956, Budapest, Hungary)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 9, Sept. 1957. Uncl.

1. SHALBAKINA, L. I. ; VAKARENKO, S. S. ; PENIN, A. I. ; BEZRUK, V. S.
2. USSR (600)
4. Afforestation
7. Leaders in steppe forestry speak. Les i step8 4 no. 10: 1952

9. Monthly List of Russian Accessions, Library of Congress, January 1953. Unclassified.

VAKARIN, A.I.

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Arrestor in the controlling mechanism for "clearers" of the "WKP-2 machine.
Turf. prom. 29 No. 8 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952, UNCLASSIFIED

VAKARIN, Ye. (Moskva)

Machines that maintain artificial climate. Zhil.-komm. khoz. 13 no.2:23
'63. (MIRA 16:3)
(Air conditioning--Equipment and supplies)

VAKARINA, Ye. F. Cand Med Sci -- (diss) "Localization of ^{the} antigen and antibodies in the organism of animals after the introduction of typhoid-fever vaccine." Mos, 1957. 12 pp (Min of Health USSR. Central Inst for the Advanced Training of Physicians), 200 copies (KL, 44-57, 101)

TINZBURG-KALININA, S.I.; VAKARINA, Ye.F.; SURNINA, T.I.

Formation of postvaccinal immunity against dysentery. Zhur.
mikrobiol., epid. i immun. 33 no.11:71-76 N '62.

(MIRA 17:1)

1. Iz Moskovskogo instituta vaktsin i syvorotok imeni
Mechnikova.

GINZBURG-KALININA, S.I.; TIMEN, Ya.Ye.; TENDETNIK, Yu.Ya.; PRYAMUKHINA,
N.S.; VAKARINA, Ye.F.

Formation of immunological reactions in experimental typhoid fever
carrier state in rabbits. Zhur. mikrobiol., epid. i immun. 40 no. 8:
14-19 Ag '63. (MIRA 17:9)

1. Iz Moskovskogo instituta vaktsin i syvorotok imeni Mechnikova.

VAKATOV, N.Ye.

A valuable suggestion from an innovator. Stroi. i dor.mashinostr.1
no.12:31 D '56. (MLRA 10:1)
(Vilnius--Painting, Industrial)

VAKATSIYENKO, I.Ye.

Mechanized backfilling of trenches containing sugar beets. Sakh.
prom. 28 no.5:21-22 '54. (MIRA 7:9)

1. Kirovogradskiy sakhsveklotrest.
(Earthmoving machinery)

KOZLOV, A.I.; VAKAYEVA, M.S.

Prospects for the development of furfurole production in the
Leningrad Economic Region. *Gidroliz.i lesokhim.prom.* 12 no.3:
23-24 '59. (MIRA 12:6)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut gidroliznoy i sul'-
fitno spirtovoy promyshlennosti.
(Leningrad economic region--Furaldehyde)

KOZLOV, A.I.; VAKAYEVA, M.S.; GORSHKOV, I.I.; BOBOVNIKOV, B.M.

Means of lowering the costs of furfureole produced by hydro-
lysis plants in operation. *Gidroliz.i lesokhim.prom.* 13
no.4:21-23 '60. (MIRA 13:7)

1. Nauchno-issledovatel'skiy institut gidroliznoy i sul'fitno-
spirtovoy promyshlennosti (for Kozlov, Vakayeva, Gorshkov).
2. Andizhanskiy gidroliznyy zavod (for Bobovnikov).
(Furaldehyde) (Hydrolysis)

COUNTRY	: USSR	F
CATEGORY	:	
ABS. JOUR.	: RZhBiol., No.3 1959, No. 10010	
AUTHOR	: Vake Akira	
INST.	: -----	
TITLE	: Variability of Plague Pathogens (B. pestis EV) in the Bodies of White Mice	
ORIG. PUB.	: Zh. mikrobiol., epidemiol. i immunobiol., 1957, No 12, 123-126	
ABSTRACT	: An "S" form was isolated from an avirulent strain of plague EV bacterium and carefully checked for purity. Through subsequent passages through the bodies of mice a transition of the "S" form to an "R" form was achieved, and this was maintained for 8-9 successive subcultures on agar. -- V. G. Petrovskaya	

Card: 1/1

VAKEFLIU, I.

Development of electric power and some major problems arising for workers in this sector, p. 1, TEKNIKA, (Ministria Industri-Miniera dhe Nderim-Komunikacion) Tirane, Vol. 3, No. 2, Mar./Apr. 1956

SOURCE: East European Accessions List, (EEAL) Library of Congress, Vol. 5, No. 12, December 1956

VAKEFLLIU, I.

"Soviet experiences; experiences in the power-network system of Armenia. "

p. 17 (Teknika) Vol. 4, no. 5, Sept./Oct. 1957
Tirane, Albania

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

VAKEFLLIU, I.

"Influence of the Enver Hydroelectric Plant on the network of our electric production."

p. 3 (Teknika) Vol. 4, no. 6, Nov./Dec. 1957
Tirane, Albania

SO: Monthly Index of East European Accessions (EFAI) LC. Vol. 7, no. 4,
April 1958

VAKENGUT, A. M.

BCG Vaccine
Central Lab., BTsZh, Central Inst. Epidemiol., and Microbiol., (-1944-).

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"Cultivation of BCG cultures on the glycocoll synthetic medium VKL,"

Zhur. Mikrobiol., Epidemiol., i Immunobiol., No. 6, 1944.

VAKENGUT, P.P.

Preparing to salute the 22d Congress with suitable achievements.
Put' i put.khoz. 5 no.8:8-9 Ag '61. (MIRA 14:10)

1. Direktor shchebenochnogo zavoda, stantsii Shershni, Yuzhno-
Ural'skoy dorogi.
(Railroads--Employees) (Socialist competition)

VAKHABOV, A.A; SULTANOV, M.B.

Effect of vincanine hydroxypropylate (OPV) on arterial blood pressure and respiration. Farm. alk. no.1:127-132'62.

(MIRA 16:9)

(VINCANINE--PHYSIOLOGICAL EFFECT) (BLOOD PRESSURE)
(RESPIRATION)

VAKHABOV, A.A.; SULTANOV, M.B.

Effect of derivatives of vincanine on neuromuscular conduction. Farm.alk. no.1:132-137'62. (MIRA 16:9)

(VINCANINE—PHYSIOLOGICAL EFFECT)
(NEUROCHEMISTRY) (MUSCLE)

VAKHABOV, A.A.

Pharmacology of hydroxybutylate of vincanins. Vop. biol.
i kraev. med. no.4:451-455 '63. (MIR 17:2)

VAKHABOV, M. G.

Dissertation defended for the degree of Doctor of Historical Sciences at
the Institute of the Peoples of Asia

"Formation of the Uzbek Socialist Nation."

Vestnik Akad. Nauk, No. 4, 1963, pp 119-145

"APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858410008-6

VAKHAROVA, R.H.

APPROVED FOR RELEASE: 08/31/2001

CIA-RDP86-00513R001858410008-6"

NIYAZOV, A.N.; VAKHABOVA, Kh.

Aromatic hydrocarbons of the naphtalene series in Kum-Dag oil.
Izv.AN Turk.SSR no.3:73-79 '56. (MLRA 9:12)

1. Otdel khimii Akademii nauk Turkmonskoy SSR.
(Hydrocarbons) (Kum Dag--Petroleum)

NIYAZOV, A.; VAKHABOVA, Kh.

Hydrocarbons of the naphthalene series of Cheleken petroleum.
Izv. AN Turk. SSR no.2:27-32 '58. (MIRA 11:4)

1. Institut khimii AN Turkmenskoy SSR.
(Cheleken District--Petroleum--Analysis)

SOV/65-58-9-3/18

AUTHORS: Niyazov, A. M; Vakhobova, Kh; Shishkina, M. V.

TITLE: Condensation of Aromatic Hydrocarbons with a Light Oily Fraction of Cheleken Petroleum. (Kondensirovannyye aromaticheskiye uglevodorody legkoy maslyanoy fraktsii Chelekenskoy nefti)

PERIODICAL: Khimiya i Tekhnologiya Topliv i Masel, 1958, Nr 9, pp 13 - 18, (USSR)

ABSTRACT: The possibility of using the picrate method for separating the condensed aromatic hydrocarbons from the light oily fraction (300 - 370°C) of Cheleken petroleum was investigated, as well as the utilization of the obtained analysis data and ultra violet absorption spectra. A number of tricyclic and tri-substituted dicyclic aromatic hydrocarbons were separated. The method described by T. Cosciug (Ref.8) and improved by S. S. Nametkin et al. (Ref. 9 and 10) was used. 6.8 kg of the oil, separated from the crude petroleum of two oil wells (67 and 60) from the Cheleken region, was used as raw material; its boiling point was within the limits of 300 - 370°C. The oil was distilled into ten-grade fractions and each narrow fraction was treated with picric acid. The separated picrate was dried on a filter paper, re-crystallized several times from ethyl alcohol and weighed.

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SOV/65-58-9-3/16

Condensation of Aromatic Hydrocarbons with a Light Oily Fraction of
Cheleken Petroleum.

Results of this process are given in Table 1. The picrates were then decomposed with a 3% alkali solution and the separated oil extracted with ethyl ether. After separation of the ether the oil was distilled two to three times over metallic sodium and narrow fractions taken off. The physico-chemical constants of the separated aromatic hydrocarbons were then defined. The ultra-violet absorption spectra (2,900 - 3,800 Å) of some fractions were investigated in a quartz spectrograph and recorded on a microphotometer; microphotograms of these fractions are shown in Figs. 1 and 2. The physico-chemical constants of the fractions are tabulated (Table 2). Fig.3: microphotogram of the absorption spectrum of the anthracene. During the recrystallization of picrates of higher fractions a gum-forming mass separated. It is possible that this is due to the partial oxidation or decomposition of the picrates. It is known that anthracene and its derivatives are comparatively easily oxidised and that anthraquinone and other substances are formed. The authors concluded that the picrate method is suitable for separating tricyclic condensed

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SOV/65-58-9-3/18

Condensation of Aromatic Hydrocarbons with a Light Oily Fraction of Cheleken Petroleum.

aromatic hydrocarbons from the light oily fractions of petroleum. The presence of phenanthrene and its homologues and also of tri-substituted naphthalenes was confirmed. The ultra-violet spectra were used for establishing the presence of anthracene and its homologues in some of the fractions. There are 3 Figures, 2 Tables and 14 References: 3 English, 10 Soviet and 1 German.

ASSOCIATION: Institut Khimii Turkmenkoy SSR (Institute of Chemistry of the Turkmen SSR)

- | | |
|-----------------------------|-----------------------------|
| 1. Petroleum--Fractionation | 2. Hydrocarbons--Separation |
| 3. Picric acid--Performance | 4. Spectrographic analysis |

. Card 3/3

S/165/60/000/002/002/008
A104/A129

AUTHORS: Niyazov, A.N., and Vakhabova, Kh.

TITLE: The problem of the chemical composition of higher fractions of the Cheleken petroleum

PERIODICAL: Akademiya nauk Turkmenskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh, khimicheskikh i geologicheskikh nauk, no.2, 1960, 29-35

TEXT: This article, compiled in cooperation with the Senior Scientific Worker Ye.S.Pokrovskaya and the Candidate of Chemistry M.V.Shishkina, is a continuation of previous papers on properties of the Cheleken petroleum (Refs. 5 and 6, Niyazov, A.N., Izvestiya AN TRRS, 1958, no. 2. and Khimiya i tekhnologiya topliv i masel, 1958, no.9). Specifically, the hydrocarbon composition of the 370-400⁰ fraction was examined. The primary oil of $d_{4}^{20} = 0.9002$, $n_D^{20} = 1.4987$ and an aromatic content of 25% in 730 g was subjected to a chromatographic fractionation with ACM (ASM) silica gel. The obtained naphthene-paraffin portion of 511 g was analyzed separately, whereas the aromatic concentrate was separated into the compounds A₁, A₂,

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The problem of the chemical composition ...

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A104/A129

A₃, A₄, and A₅ with the help of ASM silica gel. These compounds belong to monocyclic, bicyclic and tricyclic groups: compound A₅ underwent additional fractionation with aluminum oxide. All aromatic hydrocarbons were vacuum-fractionated and their characteristics were determined according to: cyclic composition, basic analysis and absorption spectra in the nearest ultraviolet zone. The latter two tests were carried out in the Institut nefti Akademii nauk SSSR (Petroleum Institute of the Academy of Sciences of USSR). Fraction A₁ consists of di-substituted and tri-substituted benzene homologues. Molecules of these hydrocarbons have one aromatic and one naphthene ring; high values of n_D^{20} are due to the latter. These hydrocarbons form no picrates. The microphotogram of the fraction absorption spectrum with $n_D^{20} = 1.5118$ shown in Fig. 1 is typical for the benzene group. The presence of aromatic and naphthene rings with paraffin chains was established in the A₂ fraction. Fig. 2 shows a microphotogram of the fraction absorption spectrum with $n_D^{20} = 1.5345$ (a) and 1.5735 (b). A low absorption coefficient in the region of 3.100-3 Å indicates a low content of naphthene hydrocarbons (5-10%). This and $n_D^{20} = 1.5359$ fraction contain bi-substituted and tri-substituted naphthalenes. Group A₃ has three rings, two of

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A104/A129

The problem of the chemical composition ...

them aromatic. Fraction A₄ is a mixture of bicyclic and tricyclic hydrocarbons. The microphotogram (Fig.3) of the absorption spectrum of fractions with $n_D^{20} = 1.6095$ reveals the presence of naphthelene and phenathrene hydrocarbons. These aromatic hydrocarbons form with picric acid brown picrates with a melting point of 107-109°C and proved easily decomposable during recrystallization. The content of C and H in A₄ reaches 98.8%, the rest are the non-hydrocarbon components S, O or N. Increased density and refraction index reduce the molecular weight of aromatic hydrocarbons and their content of hydrogen. Decreasing molecular weight is linked with the condensation of cycles and the decrease of paraffin chains. After distillation of the solvent, 0,3 g of yellow crystals was separated from the aromatic concentrate A₅ with $n_D^{20} = 1,64 - 1,66$. After recrystallization with alcohol-benzene these crystals have a melting point of 223.5 - 224.5°C, are soluble and highly fluorescent in benzene. Alcohol and petroleum ether are not suited as solvents. The remaining oil was diluted with petroleum ether, cooled to -10°C which produced further 0.17 g of crystals with melting points of 215-217°C. The basic composition of the substance with melting points of 223.5-224.5°C is as follows: C 92.92%; 92.87%; H 7, 17%; 7.21%; C₁₇ H₁₆

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The problem of the chemical composition ...

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(determined values) and C 92.72%; H 7, 28% (estimated values). The spectrum of this substance was taken in benzene solution and showed absorptions of 3,640, 3,550, 3,460, 3,415 Å which are unusual in naphthelene, phenanthrene and anthracene hydrocarbons. The inspected substance is presumed to be a chrysene homologue. The crystalline substance with melting points of 215-217°C showed an analogous absorption spectrum. The remaining oil was subjected to fractionation, i.e. adsorption fractionation of heavy aromatic concentrate of $n_D^{20} = 1.6526$ (11 g) with aluminum oxide (3). The naphthene paraffin portion has $d_4^{20} = 0.8693$ and $n_D^{20} = 1.4772$; cooled down to -39 - 40°C it resembles glass, forms no complex with carbamide but with acetone, benzene and toluene it produces a weak suspension. It is assumed that this portion of the Cheleken petroleum consists almost entirely of naphthene hydrocarbons. Fig. 4 shows the infrared absorption spectrum of the naphthene-paraffin part of the 370-400° fraction (a) and of the vaselin oil (b). The spectrum was taken by an MKC-14 (IKS-14) spectrophotometer with a NaCl prism in a 0.116 mm layer. It shows that high quality vaseline oil can be obtained from appropriate fractions of non-paraffinic Cheleken petroleum. Tests proved that aromatic hydrocarbons of the 370-400° fraction of Cheleken petroleum

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The problem of the chemical composition ...

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consist of 1-4 condensed nuclear rings and molecules containing naphthene rings and paraffin chains. Distillate 370-400° consists mainly of naphthene hydrocarbons and is a suitable raw material for the production of lubricants with low congealing properties requiring no preliminary deparaffination or depressor. After separation of aromatic hydrocarbons, higher fractions can be used as raw material for vaseline oil. There are 3 tables, 4 figures and 10 references: 7 Soviet-bloc, and 3 non-Soviet-bloc.

ASSOCIATION: Institut khimii AN Turkmenskoy SSR (Institute of Chemistry of the Turkmenskaya SSR)

SUBMITTED: November 2, 1959

Card 5/8

VAKHABOVA, Kh.; MUSAYEV, I.A.; NIYASOV, A.M.

Gas-liquid chromatography of normal paraffin hydrocarbons in
Cheleken petroleum. Izv. AN Turk. SSR. Ser. fiz.-tekhn., khim. i
geol.nauk no.6:23-30 '63. (MIRA 18:1)

1. Institut khimii AN Turkmenskoy SSR.

VAKHABOVA, Kh.; MUSAYEV, I.A.; NIYAZOV, A.M.

Use of the method of gas-liquid chromatography in analyzing
bicyclic aromatic hydrocarbons in Cheleken petroleum. Izv.
AN Turk. SSR. Ser. fiz.-tekhn., khim. i geol. nauk no.6:28-
35 '64. (MIRA 18:4)

1. Institut khimii AN Turkmenskoy SSR.

VAKHABOVA, Kh.; MOHAMMID, I.A.; NLYADOL, I.M.

Regular paraffin hydrocarbons in the petroleum of Azerbaijan.
Izv. AN Turk. SSR. Ser. fiz.-tekh. Khim. i prikl. nauki. 99-102 '65. (MIRA 12:12)

1. Institut khimii AN Turkmeneskoy SSR. Submitted Feb. 23, 1965.

VAKHABOVA, U. K., Cand of Med Sci -- (diss) "Functional state of the pancreas during certain diseases of the blood system (leukemia)."
Samarkand, 1956, 114 pp (Samarkand State Medical Institute in Acad I. P. Pavlov), 100 copies (KL, 37-57, 104)

EXCERPTA MEDICA Sec 6 Vol 13/1 Internal Med. Jan 59

382. PANCREATIC FUNCTION IN SYMPTOMATIC HYPOCHROMIC ANAEMIA
(Russian text) - Vakhobova U. K. - SBORN. NAUCH. TRUD. SAMARK.
MED. INST. 1956, 11 (247-251)

In 29 cases of secondary hypochromic anaemia, the external secretion of the pancreas was investigated by analysis of duodenal contents, and functional competence of the islet tissue was assured by a double glucose tolerance test. In 27 of the 29 cases a diminished external secretory function of the pancreas was found, markedly so in 10. This was accompanied by lowering of gastric secretory activity and

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in some cases of the intestine as a whole. Only 3 out of 12 cases preserved normal activity of the insular tissue. In 8 cases both external and internal secretory activity of the pancreas showed parallel reduction. (S)

KUL'MATOV, M.K., prof.; VAKHABOVA, U.K., kand.med.nauk; PASHENIN, P.M.,
assistant

Diagnostic significance of determining C-reactive protein in patients
with myocardial infarct. Med. zhur. Uzb. no.3:70-72 Mr '61.
(MIRA 14:5)

1. Iz kafedry propedevtiki vnutrennikh bolezney Samarkandskogo
gosudarstvennogo meditsinskogo instituta imeni I.P.Pavlova i kafedry
mikrobiologii Voenno-meditsinskoy ordena Lenina akademii imeni
S.M.Kirova.

(HEART--INFARCTION)

(PROTEINS)

KUL'MATOV, M.K., prof.; VAKHABOVA, U.K., kand.med.nauk

Significance of C-reactive protein in the differential diagnosis
of stenocardia and myocardial infarct. Med. zhur. Uzv. no.5:57-
58 My '61. (MIRA 14:6)

1. Iz kafedry propedevtiki vnutrennikh bolezney Samarkandskogo
gosudarstvennogo meditsinskogo instituta.
(PROTEINS) (HEART—DISEASES)

KUL'MATOV, M.K., prof.; VAKHABOVA, U.K., dotsent; ARUPOV, S.A., dotsent

Importance of C-reactive protein in estimating the activity of a
tuberculous process. Med. zhur. Uzb. no.6:37-39 Je '61.
(MIRA 15:1)

1. Iz kafedry propedevtiki vnutrennikh bolezney Samarkandskogo
gosudarstvennogo meditsinskogo instituta imeni I.P.Pavlova i
Samarkandskoy oblastnoy tuberkuleznoy bol'nitsy.
(PROTEINS) (TUBERCULOSIS)

KUL'MATOV, M.K., prof.; VAKHABOVA, U.K., dotsent; PASHININ, P.M., assistant

Role of C-reactive proteins in the evaluation of tuberculous
processes. Sov.med. 25 no.1:104-107 Ja '61. (MIRA 14:3)

1. Iz kafedry propedevtiki vnutrennikh bolezney Samarkandakogo
meditsinskogo instituta imeni akad. I.P.Pavlov i kafedry mikro-
biologii Voenno-meditsinskoy ordena Lenina akademii imeni S.M.
Kirova.

(TUBERCULOSIS)

(BLOOD PROTEINS)

KUL'MATOV, M.K., prof.; VAKHAEVA, U.K., ~~dozent~~; ARIPOV, S.A., assistant

Importance of C-reactive protein in the diagnosis of malignant
tumors. Nauch. trudy SamMI 23:5-6 '63 (MIRA 17:3)

1. Kafedra propedevtiki vnutrennikh bolezney Samarkandskogo meditsinskogo instituta i Samarkandskiy onkologicheskiy dispanser.

Vakhaniya, N.N.

20-6-2/42

AUTHOR: VAKHANIYA, N.N.

TITLE: On a Boundary Value Problem With Boundary Conditions on the Whole Boundary for a Hyperbolic System Which is Equivalent to the Oscillation Equation of a Chord (Ob odnoy krayevoy zadache s zadaniyem na vsey granitse dlya giperbolicheskoy sistemy, ekvivalentnoy uravneniyu kolebaniya struny).

PERIODICAL: Doklady Akad.Nauk, SSSR, 1957, Vol.116, Nr6, pp.906-909 (USSR)

ABSTRACT: In the rectangle $R : 0 \leq x \leq X, 0 \leq t \leq T$ with the boundary Γ and the ratio of the lateral lengths $T : X = \xi$ the solution of the system

$$(1) \quad \frac{\partial u_1}{\partial x} = \frac{\partial u_2}{\partial t}, \quad \frac{\partial u_1}{\partial t} = \frac{\partial u_2}{\partial x}$$

is sought, if it is

$$(2) \quad au_1|_{\Gamma} + bu_2|_{\Gamma} = f$$

where a, b and f are given on Γ .

The method elaborated by Sobolev [Ref.1] for the case $\xi = 1$ is extended by the author to the case of rational ξ . Then the case of irrational ξ is considered. Theorem:

Let ξ be irrational, $a^2 - b^2 \neq 0$ on Γ , $u_1(x, t)$ and $u_2(x, t)$

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On a Boundary Value Problem With Boundary Conditions on the Whole Boundary for a Hyperbolic System Which is Equivalent to the Oscillation Equation of a Chord 20-6-2/42

be a continuous solution of (1). If $f \equiv 0$ on Γ and $u_2(x, t)$ vanishes in a point M of Γ , then is $u_1(x, t) \equiv 0$ and $u_2(x, t) \equiv 0$ in R .

Theorem: Let φ satisfy the inequality $|\varphi - \frac{m}{n}| > \frac{A}{n^{K+1}}$ where

A is a fixed positive constant, K a fixed integer, let $a^2 - b^2 = 1$ on Γ . On each side of R it is assumed $f \in C^{K+4}$, $\ln|a+b| \in C^{2K+6}$, whereby in the four joints of R these functions and their even derivatives are assumed to be continuous

up to the $2\left[\frac{K+4}{2}\right]$ -th and $(2K+6)$ -th order respectively. Then there exists a two-times continuously differentiable solution of (1) - (2). There are 4 references, 2 of which are Slavic.

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Cand. 2/2

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lems for the equation of ~~the~~ vibration of a string in a rectangular
field." Tbilisi, Publishing House of the Acad Sci ~~of the~~ Georgian SSR,
1958. 6 pp (Mos State U in M.V. Lomonosov. Phys-Math Faculty), 160 co-
pies. Bibliography at end of text (10 titles) (ML, 44-53, 119)

-3-

VAKHANIYA, N.N.

The Dirichlet problem for the vibrating string equation. Soob.
AN Gruz.SSR 21 no.2:131-138 Ag'58. (MIRA 12:6)

1. AN GruzSSR Vychislitel'nyy tsentr, Tbilisi. Predstavleno
akademikom N.I. Muskhelishvili.
(Vibration)

S/774/60/001/000/001/012

AUTHOR: Vakhaniya, N. N.

TITLE: On an approximate solution of the Dirichlet problem for the equation of a chord.

SOURCE: Akademiya nauk Gruzinskoy SSR. Vychislitel'nyy tsentr. Trudy. v.1.
1960, 41-49.

TEXT: The paper examines the Dirichlet problem for the equation of a chord posed in a form that is at variance with that of the classical problems of mathematical physics. As posed (F. John, Am. J. of Math., v. 63, 1941, 141), the character of the problem depends on the shape of the closed region R for which the problem is to be solved. The problem as formulated is examined here only for that case in which the region R is a rectangle; $0 \leq x \leq L_1$, $0 \leq y \leq L_2$. In this instance, the character of the problem examined depends on certain arithmetical properties of the ratio $\rho = L_1/L_2$. For rational values of ρ , the corresponding homogeneous problem admits an unnumbered multiplicity of (continuous) untrivial solutions, whereas the nonhomogeneous problem, generally speaking, is not solvable. By contrast, for irrational values of ρ , the homogeneous problem does not admit any (continuous) non-trivial solutions, whereas the nonhomogeneous problem becomes solvable in the class

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On an approximate solution

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of continuous differentiability $C^{(1, \epsilon)}$ for almost all values of p in the sense of the Lebesgue measure. The present note shows that the above-indicated difference between rational and irrational p , in a certain sense, can be regarded as "quantitative"; for rational numbers that are "close to" irrationals, that is, for $p = m/n$ with sufficiently large values of the irreducible integers m and n , the picture - in a certain sense - is similar to that which occurs with irrational values of p . In particular, in either case, the approximate solution of the problem produces an exact solution for the fundamental equation that satisfies the specified boundary conditions only approximately. Here the error for a given boundary function f in the case of $p = m/n$ depends on the value of the sum $m+n$ and is sufficiently small for a sufficiently large value of this sum. In the case of an irrational p , the error can be made smaller than any prescribed number $\epsilon > 0$. Furthermore, under fairly broad assumptions, an affirmative answer is given to the following natural question: If it is assumed that for a given irrational p and a given boundary function f the problem does in fact admit a solution, is it not possible to obtain this (unique) solution as a commensurate limit of the approximate solutions constructed for rational values m_i/n_i that approximate the given irrational number p ? There are 9 references (4 Russian-language Soviet, 5 English-language, of which 1 in Russian translation).

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Card 2/2

AUTHOR: Vakhaniya, N. N.

TITLE: Concerning one singular problem for an equation of the
mixed type

CITED SOURCE: Tr. Vychisl. tsentra. AN GruzSSR, v. 3, 1962(1963),
69-80

TOPIC TAGS: partial differential equation, existence theorem,
boundary value problem